

FIG.1

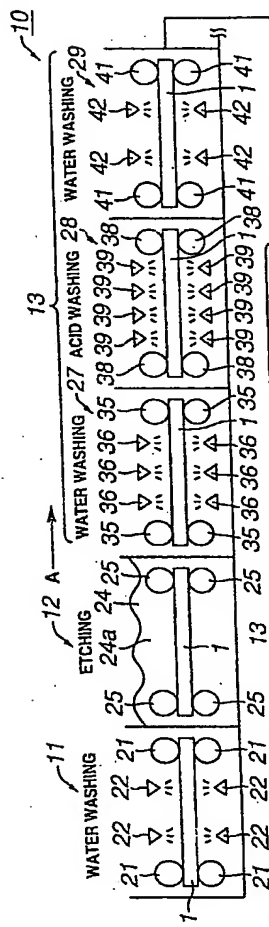


FIG. 2A

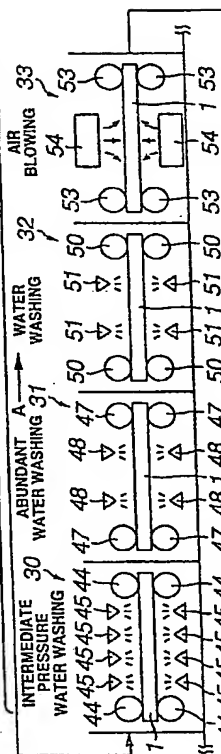


FIG. 2B

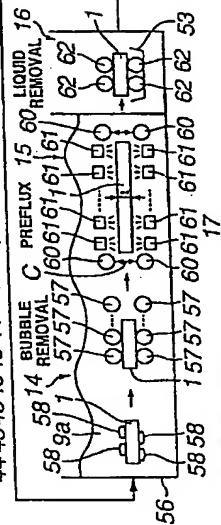


FIG. 2C

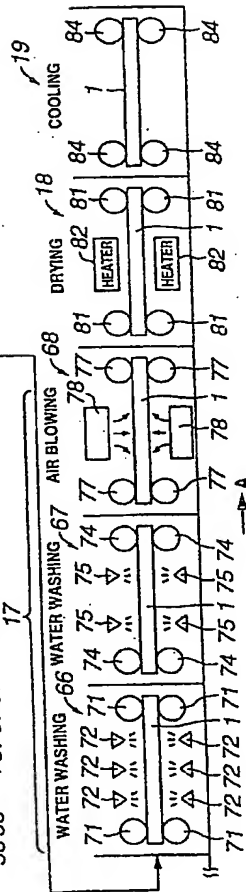


FIG. 2D

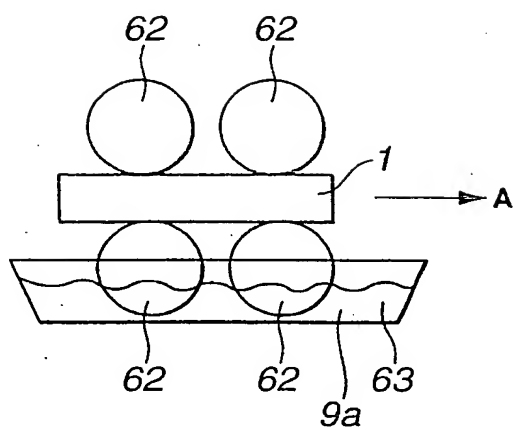


FIG.3

	PROCESS	AGENT USED	TEMPERATURE	TRANSFER SPEED	PROCESSING	SPRAY PRESSURE
STEP1	WATER WASHING	WELL WATER	AMBIENT	3m/min	EACH TWO SPRAY UNITS ABOVE AND BELOW	0.1MPa OR HIGHER
STEP2	SOFT ETCHING	PRT-01 BY MECK INC. (MAIN COMPONENT: SULFURATED WATER)	30°C		DIP30s	
STEP3	WATER WASHING	WELL WATER	AMBIENT		EACH THREE SPRAY UNITS ABOVE AND BELOW	0.1MPa OR HIGHER
STEP4	ACID WASHING	5% SULFURIC ACID	AMBIENT		EACH FOUR SPRAY UNITS ABOVE AND BELOW	0.2MPa OR HIGHER
STEP5	WATER WASHING	PURE WATER	35°C		EACH TWO SPRAY UNITS ABOVE AND BELOW	0.1MPa OR HIGHER
STEP6	INTERMEDIATE PRESSURE WATER WASHING	PURE WATER	35°C		EACH FOUR SPRAY UNITS ABOVE AND BELOW	0.5MPa OR HIGHER
STEP7	ABUNDANT WATER WASHING	PURE WATER	35°C		EACH TWO SPRAY UNITS ABOVE AND BELOW	5L/cm ² ·min OR HIGHER
STEP8	FRESH WATER WASHING	PURE WATER	35°C		EACH TWO SPRAY UNITS ABOVE AND BELOW	0.1MPa OR HIGHER
STEP9	AIR BLOWING					
STEP10	BUBBLE REMOVAL	TERFACE F2 BY SHIKOKU KASEI (MAIN COMPONENTS: ACETIC ACID & IMIDAZOLE)	35°C		DIP120s+	
STEP11	PREFLUX	TERFACE F2 BY SHIKOKU KASEI (MAIN COMPONENTS: ACETIC ACID & IMIDAZOLE)	35°C		EACH TEN SPRAY UNITS ABOVE AND BELOW	0.1MPa OR HIGHER
STEP12	LIQUID REMOVAL					
STEP13	FRESH WATER WASHING	PURE WATER	AMBIENT		EACH THREE SPRAY UNITS ABOVE AND BELOW	0.1MPa OR HIGHER
STEP14	FRESH WATER WASHING	PURE WATER	AMBIENT		EACH TWO SPRAY UNITS ABOVE AND BELOW	0.1MPa OR HIGHER
STEP15	AIR BLOWING				30s	
STEP16	DRYING		150°C		20s	
STEP17	COOLING		AMBIENT			

FIG.4

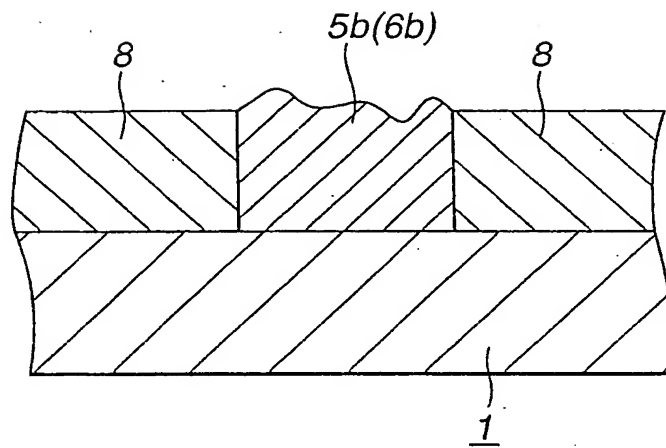


FIG.5

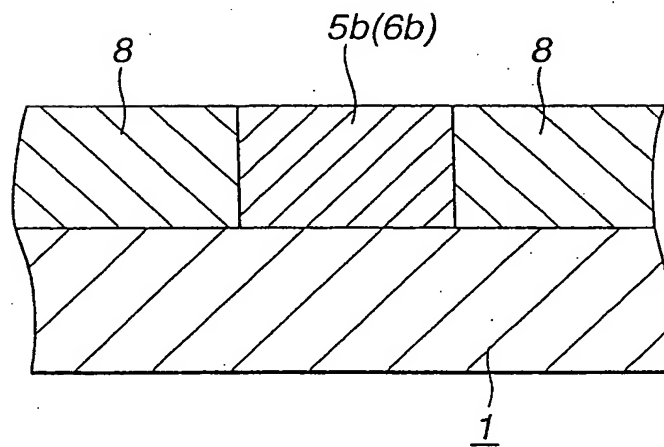


FIG.6

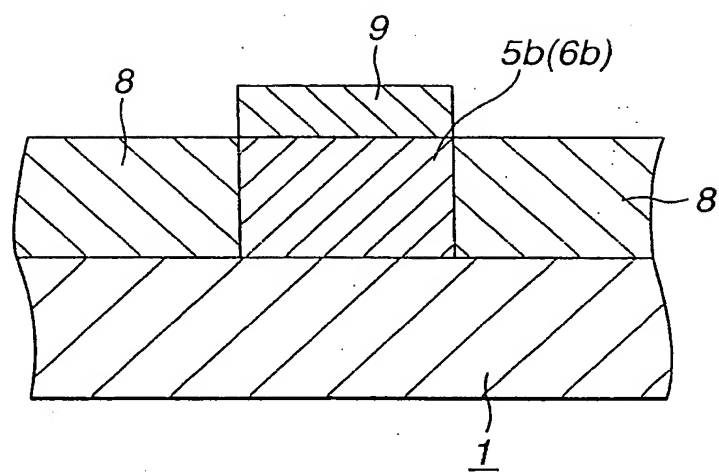


FIG.7